



Department of Education Sustainability Plan



Date: February 14, 2005

Agency Coordinator: Jim Hartigan

Phone: 781-338-6741

Email: jhartigan@doe.mass.edu

This Sustainability Plan has been reviewed and approved by Ron Minervini of the Department of Education on February 14, 2005.

Signature of Agency Head or other Appropriate Designee

1. Agency Information, Impact Identification and Sustainability Team

1.1 Agency Description and Scope

The mission for the Department of Education is "To improve the quality of the public education system so that students are adequately prepared for higher education, rewarding employment, continued education, and responsible citizenship. We carry out our mission in partnership with Massachusetts school districts and other organizations that provide educational programs and services. Students, parents, teachers and other educators, elected officials, business and community leaders, and the public all are stakeholders in the work of the Department to improve schools and raise student achievement."

The Department of Education (DOE) main office is at 350 Main Street, Malden with satellite locations at 17th Pleasant Street, Malden and Room 1017 in the McCormack Building, Boston for a total of three facility/building locations.

There are approximately 550+ employees at DOE, and the agency occupies approximately 95,000 square feet of space.

1.2 Agency Impacts on the Environment and Human Health

The Massachusetts Department of Education's environmental impacts are related to the Department's energy and water consumption, and the solid waste generated.

Space heating and cooling, lighting, heating water, motor vehicle operation, and office equipment and appliance usage contribute to the production of greenhouse gas emissions and other air pollutants such as sulfur dioxide and nitrous oxide, which are the leading causes of acid rain and ground-level smog. These activities also lead to the reduction of natural resources associated with the mining of fossil fuels such as coal, gas and oil.

The Department's water consumption related to the usage of faucets, flushes, drinking fountains, and building cleaning activities drain public water resources such as lakes, ponds, rivers, streams and reservoirs, increase the need for sewer and water treatment operations, and allow contaminants such as non-biodegradable cleaning agents to enter the ecosystem.

Other activities pertaining to the procurement and distribution of office resources, and the usage of office equipment such as photocopiers, laser printers, and fax machines generate solid waste that increases landfill usage and/or incinerator emissions.

In addition, solid waste generated from the disposal of computers, monitors, fluorescent lamps and other electronic equipment increases the possibility of allowing hazardous substances and PBTs, such as lead and mercury, to enter the environment and food chains.

The focus of the Massachusetts Department of Education's FY 2005 Sustainability Plan will be to implement policies and practices that should diminish some of the primary environmental impacts that have been outlined above.

1.3 Agency Operational Costs

Electricity - \$184,500.00 per year (2,271,980 kwh)

Gas - \$ 7000.00 per year (3,352 therms)

1.4 Agency Sustainability Team Members

Jim Hartigan – agency coordinator

Ron Minervini – team leader

Mike McEnelly – team member

Barry Caine – team member

Kristin Estes – team member

Andrea Ranger – State Sustainability Coordinating Council liaison.

Mary Faith-Arend – team member

Meeting are held on a monthly basis.

2. Long-Term Goals/Vision

2.1 Long-Term Goals

As stated by the State Sustainability Program, and commonly accepted elsewhere, the definition of sustainability is meeting the needs of the present generation without compromising the ability of future generations to meet their needs. (Originally from the 1987 World Commission on Environment and Development Brundlandt Report).

The Department of Education has a responsibility to future generations not only to include the concept of sustainability in its public school curricula, but to adopt sustainability as a deliberate, conscious, and daily practice.

Sustainability is most commonly associated with recycling, but more accurately, recycling is only one part of sustainability. Sustainability is the consumption and replenishment of resources within human generations, or simply, living off of the interest of energy and material resources (such as using only renewably generated power) versus cashing in the principal (consuming non-renewable fuels such as coal or natural gas) that take many thousands if not millions of years to regenerate.

The long-term goal of the Department of Education is therefore to align its practices with those that support the cycle of use, reuse, and replenishment of natural resources – “living off the interest.” Given the impacts of agency’s operations, its long-term goals are:

- 25% reduction in the net consumption of energy.
- Zero use and emission of toxic and persistent substances.
- Purchase of only Environmentally Preferable Products that are deemed “sustainable” throughout their life cycles.
- 25% reduction in net generation of waste, either solid waste, sewage waste or other emissions.
- Healthy indoor environmental quality for all employees– this includes air quality, temperature, and lighting.
- Consumption of water in line with local ability to supply water and absorb waste water.
- Successful education and support of DOE employees around sustainability concepts.
- Support Massachusetts K-12 public schools, within its mandate, in their efforts to achieve sustainability.

Many of the long-term goals are impractical or unachievable due to excessive cost or lack of supportive infrastructure, or usually, both. Therefore, the horizon for accomplishing these goals needs to allow time for market forces, sustainable resources, and infrastructure to develop and mature. Some goals, such as no net consumption of energy, could take as long as 40 to 50 years to accomplish while purchase of “sustainable” EPP’s could be realized in 15 to 20 years from now.

Some mid-term actions will help the Department of Education in the interim, such as: Working with the landlords and building management companies to achieve its sustainability goals; writing goals into the lease with the landlord; reaching out to other building tenants to seek their support and increase demand for sustainable practices in the building.

Prior to the creation of this plan, it is important to recognize that the Department of Education has already taken substantial steps toward sustainability. The following list of short-term actions will help the agency move toward its ambitious long-term goals:

3. Short-term Actions and Priorities

3.1 Priority and Areas Goals

Purchasing:

- Increase the volume of EPP products obtained.
- Recycle shipping supplies.

Printing/Copying:

- Encourage and enforce duplex copying.
- Implement a recycling program for copier & laser supplies.

Computer Equipment:

- Reduce energy consumption by computer related equipment.
- Utilize surplus equipment.
- Dispose of computer equipment in an environmentally safe manner.

Building Heating/Cooling and Environment:

- Conserve energy needed to heat and/or cool DOE's work areas.
- Replace all HVAC filters on a regular basis.
- Implement aggressive cleaning schedule using environmentally friendly products and the use of Hepa filters in all areas that require vacuuming.

Lighting:

- Continue to seek and implement energy efficient and effective lighting.

Recycling:

- Expand on an existing successful paper-recycling program by including other materials.

Cleaning Agents:

- Use environmentally-safe cleaning agents.

Furnishings:

- Procure furniture that does not generate harmful volatile organic compounds or VOC's.

Carpet:

- When selecting new carpet, consider carpet that contains recycled content and is recyclable.

Paper & Postage:

- Reduce the volume of supplies consumed and the related costs.
- Reduce the quantity of services provided and the related costs.

Vertical Transportation:

- Encourage able-bodied employees to use stairs to access different floors in the agency.

Vending Machines:

- Use energy efficient vending machines or install controllers such as the Vending Miser to reduce electricity consumption.

Refrigerators:

- Purchase high efficiency, Energy Star refrigerators.

Key Issues to Consider when Purchasing

Greening the office challenges one to think about whether your organizations' 'needs' can be met in different ways.

- ☐ Can we lease, share or swap instead of purchasing?
- ☐ Does the product have an environmental, energy rating or water-rating label?
- ☐ Does the product have EnergyStar features or a 'sleep' mode for when it is not being used?
- ☐ Does the supplier have good environmental credentials?
- ☐ Is upgrading, reconditioning or extending the useful life of our current model a better option?
- ☐ How long will this particular product last?
- ☐ Will it be easily repaired or upgraded?
- ☐ Are we paying for features we don't need and won't use?
- ☐ How much energy or materials will it use?
- ☐ Does the product contain recycled materials?
- ☐ Can this product be recycled, sold or donated when we've finished with it?
- ☐ Does it come with too much packaging?

3.2 Agency Action Steps

- Issue a desk side recycle bin to all employees and provide weekly pickups.
- Strategically locate large recycle bins.
- Routinely pick up used toner. See recycling.
- Use the old carpet for padding under new carpeting to reduce landfill waste, recycle existing carpet, and reduce costs.
- Purchase Environmentally Preferable Products (EPP's) from the state vendor's list whenever possible.
- Coordinate purchasing in the Department so that all purchasing agents are choosing EPP's whenever available.
- Return and/or recycle shipping pallets and cardboard boxes.
- Encourage computer and copier users to avoid creating documents with large darkened areas to reduce the volume of ink or copier toner used.
- Recycle used toner cartridges and obtain a credit toward future purchases.
- Purchase refurbished/recycled toner cartridges whenever available.
- Purchase high-efficiency Energy Star appliances and equipment.
- Program copiers to duplex as the default setting.
- Purchase laser printers with the ability to print double-sided copies.
- Continue to shampoo carpets with a chemical-free and environmentally-safe powder.
- Encourage all DOE employees to shut off their computer systems and accompanying equipment, such as speakers, every night.
- Have clean-up/recycle days on a regular basis.
- Set up all computer monitors with screen savers.
- Transfer surplus computer equipment to schools and non-profit entities.
- Recycle worthless computer equipment via a specialized vendor.
- Educate employees about how to use thermostats so that the setback features are not overridden during unoccupied hours.

- Work with the landlord to ensure that the most efficient HVAC systems are used for the DOE offices.
- Educate employees to open or close their blinds to regulate solar heat accordingly.
- Lock thermostats to control “thermostat wars.”
- Encourage all DOE employees to turn off task lighting and other office lights every night before leaving their workspaces.
- Install energy efficient lighting.
- Expand DOE’s recycling program to include aluminum cans, plastics, and glass.
- Establish desk side recycling throughout the agency.
- Recycle consumable supplies such as binders.
- Use low or no-toxicity powder cleaning agents on carpeting and other surfaces where appropriate.
- Avoid purchasing furniture that contains formaldehyde and other VOC’s.
- Seek furniture that has recycled content material in it and/or is made from wood approved by the Forest Stewardship Council.
- Encourage two-sided printing for all mailings to reduce mailing costs by 50%.
- Utilize two-day UPS shipping vs. next-day whenever possible.
- Reduce courier deliveries to established days and times in order to reduce the quantity of deliveries, associated costs and energy consumption.

4. Management Systems and Institutionalisation

4.1 Integrating Environmental Impacts into Key Decision Points

Sustainability issues should always be considered whenever opportunities arise. Decision points within the Agency include Printing, Purchasing, and Facilities Management.

4.2 Education and Training of Staff

We will add DOE’s Sustainability Plan to DOE’s Intranet site. In addition, power point training will be loaded into DOE’s computer system. All employees will be required to electronically “sign in” and review the electronic lesson. We will host a workshop for new staff in order to educate people on the importance of EPPs and the availability to them on state contract. A “one

paper” regarding DOE’s short-term goals, long term goals, and action steps will be part of the orientation folder for all new employees.

4.3 Management Systems

The Department of Education does not have a formal Environmental Management System in place. Some practices and policies have been put into place to address sustainability. Upon completion of our Sustainability Plan, the document will be distributed to all employees. DOE will focus on:

- Procurement staff will be required to purchase EPP consumable products when available. The Administrators of these Units will monitor procurement requests to ensure compliance.
- Track purchases of EPPs every fiscal year.
- Reduce or eliminate the use of all products containing mercury.
- Environmental responsibilities have been incorporated into job descriptions and performance reviews for Operations staff.
- Environmental considerations are built into standard operating procedures.
- Employee feedback will be solicited via e-mail to review program outcomes.
- Include top-level management in the activity of the prioritization process.
- Perform spot checks to confirm that employees are recycling white paper. Check with building management regarding the volume obtained on their weekly desk-side pick-ups. Obtain a list of employees who are not participating.
- Since many of the actions target resource efficiency, financial accounting/reporting will be used to capture data and to monitor.
- The Operations Unit will determine how to integrate employees into sustainability initiatives in a manner that does not unnecessarily burden them.
- Recycling/redeployment of surplus equipment, furniture and supplies will be a mandated practice across the Department.

5. Tracking Progress and Program/Plan Review

5.1 Agency Tracking and Reporting Form

The Sustainability Team will establish timelines after the end of each fiscal year to compile information, review goals, and utilize the data collected to create the annual tracking form.

5.2 Continuous Improvement

The Sustainability Team will meet every two months to track the progress of established short-term goals. Data will be collected and utilized as needed to prepare the annual report.

Appendix 4 - Agency Sustainability Workplan Worksheet - Accomplished Goals

Sustainable Goal	Benefits	Specific Tasks	Responsible Staff	Timeline
Purchase remanufactured laser printer and inkjet printer toner cartridges whenever possible via the statewide contract.	Save 10 to 20% by buying remanufactured cartridges; reduces the amount of solid waste sent to landfills and incinerators.	Review existing statewide contracts for vendors that offer remanufactured toner cartridges before purchasing OEM products.	Mike McEnelly John Scheiffern	During the period of 7/1/03 to 6/30/2004, 352 remanufactured laser and inkjet toner cartridges were purchased; 54% of all laser and inkjet toner cartridges purchased by the Agency were remanufactured.
Dispose or recycle computer equipment and other related electronic equipment in an environmentally safe manner.	Decrease the possibility of allowing hazardous substances (mercury, lead, etc.) from entering the solid waste stream.	Ensure that all computer and other related electronic equipment is disposed or recycled by utilizing an approved State vendor for hazardous waste disposal.	Mike McEnelly John Scheiffern	During the period of 7/1/03 to 6/30/04, 13,376 lbs. of computer and related electronic equipment was disposed or recycled by Onyx Services, Inc.
Recycle used laser printer and inkjet printer toner cartridges; implement end-of-life recycling policy for all toner cartridges.	Reduce the amount of solid waste sent to landfills and incinerators. Obtain credit towards new purchases whenever possible.	Ensure that all used laser printer and inkjet toner cartridges are retrieved by a recycling vendor at no charge to the Agency.	Mike McEnelly John Scheiffern	During the period of 7/1/03 to 6/30/04, 306 laser printer and inkjet toner cartridges were recycled by American Recycle Inc.

Purchase general office supplies such as note pads; folders, etc. that contain recycled content whenever possible.	Reduce the amount of solid waste sent to landfills and incinerators.	Purchase general office supplies that contain recycled content by searching the online catalogue provided by our preferred vendor, New England Office Supply.	Mike McEnelly John Scheiffern	During the period of 7/1/03 to 6/30/04, \$23,629 worth of office EPP supplies were purchased from New England Office Supply.
Install 100% recyclable carpeting at 350 Main St.	Reduce the amount of waste sent to landfills and incinerators.	Utilized a cost effective and sustainable products mindset to replace carpeting.	Barry Caine	During the period of 7/1/03 to 6/30/04 approximately 90,000sf of 100% recyclable carpeting was replaced at 350 Main St. while utilizing the old carpeting as padding instead of disposing it at a landfill. Also did not have to purchase carpet pads.
Install occupancy sensor lighting controls and water faucet aerators in the restrooms.	Electrical energy and water resource conservation. Cost savings.	Installation of occupancy sensors and aerators on all of the faucets in the restrooms by PL Management to save electrical energy and reduce water consumption.	Barry Caine PL Management	FY04

Recycle DOE waste paper.	Reduction in the amount of solid waste sent to landfills and incinerators. Natural resources preservation.	Provided recycle bins and containers throughout the Agency to encourage the full participation of DOE employees in the recycling of waste paper with FCR.	DOE	During the period of 7/1/03 to 6/30/04, 61.47 tons of waste paper was recycled by FCR recycling at no cost to the Agency.
Recycle/refurbish DOE phones.	Reduction in use of energy resources for production and landfill waste. Cost savings.	Include in the telecommunication maintenance contract a clause for the return of broken phones for free refurbished or new phones. The broken phones are refurbished /reused or used for parts.	Kristin Estes	During the period of 7/1/03 to 6/30/04 recycled and refurbished phone systems were utilized saving the Agency \$6,910.00
Install Energy Star equipment whenever possible.	Cost savings. Energy conservation.	Ensure that all new copiers, fax, and printers that are purchased or leased are Energy Star compliant. Have all machines default to "standby mode" when not in use to save energy.	Jim Hartigan Mike McEnelly DOE-Technology Staff	During the period of 7/1/03 to 6/30/04 all of the older analog copiers and fax machines that became outdated were replaced with Energy Star compliant machines.
Install energy efficient fluorescent lighting.	Energy conservation Cost savings.	Replaced older less efficient 64 watt fluorescent lights with newer 51 watt lamps throughout the Agency. These lamps now produce more light using less energy.	Barry Caine PL Management	FY04
Promote the use of environmentally safe cleaning products in all areas of the Agency.	Sound environmentally safe choices help the overall health and well being of all employees.	Dry, environmentally safe, carpet cleaner from ECO Logic Ltd. is used exclusively throughout the Agency.	Barry Caine PL Management	FY04

Appendix 5 - Agency Sustainability Workplan Worksheet - Action Items

<p>Coordinate and monitor existing Department-wide recycling policies and programs while simultaneously seeking new ideas and practices to help eliminate waste and reduce costs.</p>	<p>Cost savings.</p> <p>Energy conservation.</p> <p>Healthier work environment.</p>	<p>Implement an aggressive paper recycling adherence policy.</p> <p>Issue desk side recycle bins to all employees and provide weekly desk side pickups.</p> <p>Have clean-up/recycle days on a regular basis.</p> <p>Recycle toner cartridges.</p> <p>Return and recycle wooden pallets.</p> <p>Recycle all cardboard boxes.</p> <p>Use two sided printing practices whenever possible.</p> <p>Develop a recycling program for glass and plastic products.</p> <p>Establish used battery collection drops.</p> <p>Reduce or eliminate mailing and postage costs through the use electronic information dissemination via email or DOE website.</p>	<p>Jim Hartigan</p> <p>Mike McEnelly</p> <p>Barry Caine</p> <p>Kristin Estes</p>	<p>FY05</p>
<p>Increase the percentage of both recycled and Environmentally Preferable Products purchased from NEOS or Corporate Express.</p>	<p>Products have a beneficial effect on human health and the environment.</p> <p>Purchases are automatically recorded and tracked for easy record keeping.</p>	<p>Develop EPP purchasing mindset.</p> <p>Encourage the procurement of recycled products whenever feasible and when cost, performance, and availability are not compromised.</p>	<p>Mike McEnelly</p> <p>DOE - Purchasing Staff</p>	<p>FY05</p>

Increase percentage of copier, fax, and printer cartridges recycled to 75-80% of total purchased.	Reduce the amount of waste sent to landfills. Cost savings.	Review existing statewide contracts for vendors that offer recyclable/rechargeable cartridges.	Mike McEnelly John Scheiffert Jim Hartigan	FY05
Recycle used fluorescent lamps removed from areas throughout the Agency.	Reduction in hazardous waste contaminants entering the environment. Sound sustainability practice.	Utilize existing recycling companies that are currently recycling other DOE waste.	Barry Caine	FY05
Recycle office furniture systems.	Reduce waste sent to landfills and incinerators. Cost savings.	Recycle old or obsolete office furniture systems with external vendors.	Barry Caine	FY05

